Grade 6 Academic Standards

Unit 5 Lesson

Science

Standard 1 The Nature of Science and Technology

Scientific Inquiry

6.1.2 Give examples of different ways scientists investigate natural phenomena and identify processes all scientists use, such as collection of relevant evidence, the use of logical reasoning, and the application of imagination in devising hypotheses and explanations, in order to make sense of the evidence.

The Scientific Enterprise

6.1.6 Explain that computers have become invaluable in science because they speed up and extend people's ability to collect, store, compile, and analyze data, prepare research reports, and share data and ideas with investigators all over the world.

Technology and Science

6.1.7 Explain that technology is essential to science for such purposes as access to outer space and other remote locations, sample collection and treatment, measurement, data collection and storage, computation, and communication of information

6.1.8 Describe instances showing that technology cannot always provide successful solutions for problems or fulfill every human need.

6.1.9 Explain how technologies can influence all living things.

Standard 2 Scientific Thinking

Communication Skills

6.2.8 Analyze and interpret a given set of findings, demonstrating that there may be more than one

Critical Response Skills

6.2.9 Compare consumer products, such as generic and brand-name products, and consider reasonable personal trade-offs among them on the basis of features, performance, durability and costs.

Standard 3 The Physical Setting

The Earth and the Processes That Shape It

6.3.13 Identify, explain and discuss some effects human activities, such as the creation of pollution, have on weather and the atmosphere.

6.3.16 Explain that human activities, such as reducing the amount of forest cover, increasing the amount and variety of chemicals released into the atmosphere, and farming intensively, have changed the capacity of the environment to support some life forms.

Standard 4 The Living Environment

Interdependence of Life and Evolution

6.4.8 Explain that in all environments, such as freshwater, marine, forest, desert, grassland, mountain, and others, organisms with similar needs may compete with one another for resources, including food, space, water, air, and shelter. Note that in any environment, the growth and survival of organisms depend on the physical conditions.

6.4.10 Describe how life on Earth depends on energy from the sun.

Social Studies

Standard 3 Geography

Environment and Society

6.3.13 Analyze and give examples of the consequences of human impact on the physical environment, and evaluate ways in which technology influences human capacity to modify the physical environment.

6.3.14 Give examples of how both natural and technological hazards have impacted the physical environment and human populations in specific areas of Europe and the Americas.

Uses of Geography

6.3.16 Identify environmental issues that affect Europe and the Americas. Examine contrasting perspectives on these problems, and explain how human-induced changes in the physical environment in one place cause changes in another place.

Standard 4 Economics

6.4.8 Analyze current economic issues in the countries of Europe or the Americas using a variety of information resources.

6.4.10 Identify situations in which the actions of consumers and producers in Europe or the Americas help or harm other individuals who are not directly involved in the consumption or production of a product.

Standard 5 Individuals, Society, and Culture

6.5.5 Identify examples of inventions and technological innovations that have brought about cultural change in Europe and the Americas, and examine their impact.

Unit 5 – Activities 1 through 7 satisfy the following Indiana academic standards:

Science

6.1.2 Give examples of different ways scientists investigate natural phenomena and identify processes all scientists use, such as collection of relevant evidence, the use of logical reasoning, and the application of imagination in devising hypotheses and explanations, in order to make sense of the evidence.

6.1.6 Explain that computers have become invaluable in science because they speed up and extend people's ability to collect, store, compile, and analyze data, prepare research reports, and share data and ideas with investigators all over the world.

6.1.7 Explain that technology is essential to science for such purposes as access to outer space and other remote locations, sample collection and treatment, measurement, data collection and storage, computation, and communication of information.

6.1.9 Explain how technology can influence all things.

6.2.2 Use technology, such as calculators or computer spreadsheets, in analysis of data.

6.2.6 Read simple tables and graphs produced by others and describe in words what they show.

6.2.8 Analyze and interpret a given set of findings, demonstrating that there may be more than one good way to do so.

6.2.9 Compare consumer products, such as generic and brand-name products, and consider reasonable personal trade-offs among them on the basis of features, performance, durability, and costs.

6.3.13 Identify, explain and discuss some effects human activities, such as the creation of pollution, have on weather and the atmosphere.

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6.4.8 Explain that in all environments, such as freshwater, marine, forest, desert, grassland, mountain, and others, organisms with similar needs may compete with one another for resources, including food, space, water, air and shelter. Note that in any environment, the growth and survival of organisms depend on the physical conditions.

6.7.2 Use models to illustrate processes that happen to slowly, too quickly, or on too small a scale to observe directly, or are too vast to be changed deliberately, or are potentially dangerous.

Mathematics

6.2.3 Multiply and divide decimals

6.6.1 Organize and display single-variable data in appropriate graphs and stem-and-leaf plots, and explain which types of graphs are appropriate for various data sets.

6.7.1 Analyze problems by identifying relationships, telling relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns.

Social Studies

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